

SEQUENCE LISTING

<110> Kosan Biosciences, Inc.
Santi, Daniel
Peck, Larry
Dayem, Linda
Kealey, James

<120> ISOLATED GENE FOR METHYLMALONYL COA EPIMERASE AND USES THEREOF

<130> 30062-20049.10

<140> To be Assigned
<141> Herewith

<150> US 09/699,136
<151> 2000-10-27

<150> US 60/161,414
<151> 1999-10-25

<150> US 60/161,703
<151> 1999-10-27

<150> US 60/206,082
<151> 2000-05-18

<160> 2

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 447
<212> DNA
<213> Artificial Sequence

<220>
<223> Isolated and recombinant form of the full
epimerase gene sequence

<221> CDS
<222> (1) . . . (444)

<400> 1
atg agt aat gag gat ctt ttc atc tgt atc gat cac gtg gca tat gcg 48
Met Ser Asn Glu Asp Leu Phe Ile Cys Ile Asp His Val Ala Tyr Ala
1 5 10 15

tgc ccc gac gcc gac gag gct tcc aag tac tac cag gag acc ttc ggc 96
Cys Pro Asp Ala Asp Glu Ala Ser Lys Tyr Tyr Gln Glu Thr Phe Gly
20 25 30

tgg cat gag ctc cac cgc gag gag aac ccg gag cag gga gtc gtc gag 144
Trp His Glu Leu His Arg Glu Glu Asn Pro Glu Gln Gly Val Val Glu
35 40 45

atc atg atg gcc ccg gct gcg aag ctg acc gag cac atg acc cag gtt 192
 Ile Met Met Ala Pro Ala Ala Lys Leu Thr Glu His Met Thr Gln Val
 50 55 60

 cag gtc atg gcc ccg ctc aac gac gag tcg acc gtt gcc aag tgg ctt 240
 Gln Val Met Ala Pro Leu Asn Asp Glu Ser Thr Val Ala Lys Trp Leu
 65 70 75 80

 gcc aag cac aat ggt cgc gcc gga ctg cac cac atg gca tgg cgt gtc 288
 Ala Lys His Asn Gly Arg Ala Gly Leu His His Met Ala Trp Arg Val
 85 90 95

 gat gac atc gac gcc gtc agc gcc acc ctg cgc gag cgc ggc gtg cag 336
 Asp Asp Ile Asp Ala Val Ser Ala Thr Leu Arg Glu Arg Gly Val Gln
 100 105 110

 ctg ctg tat gac gag ccc aag ctc ggc acc ggc ggc aac cgc atc aac 384
 Leu Leu Tyr Asp Glu Pro Lys Leu Gly Thr Gly Gly Asn Arg Ile Asn
 115 120 125

 ttc atg cat ccc aag tcg ggc aag ggc gtg ctc atc gag ctc acc cag 432
 Phe Met His Pro Lys Ser Gly Lys Gly Val Leu Ile Glu Leu Thr Gln
 130 135 140

 tac ccg aag aac tga 447
 Tyr Pro Lys Asn
 145

<210> 2
 <211> 148
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Deduced amino acid sequence of the epimerase gene
 sequence

<400> 2
 Met Ser Asn Glu Asp Leu Phe Ile Cys Ile Asp His Val Ala Tyr Ala
 1 5 10 15
 Cys Pro Asp Ala Asp Glu Ala Ser Lys Tyr Tyr Gln Glu Thr Phe Gly
 20 25 30
 Trp His Glu Leu His Arg Glu Glu Asn Pro Glu Gln Gly Val Val Glu
 35 40 45
 Ile Met Met Ala Pro Ala Ala Lys Leu Thr Glu His Met Thr Gln Val
 50 55 60
 Gln Val Met Ala Pro Leu Asn Asp Glu Ser Thr Val Ala Lys Trp Leu
 65 70 75 80
 Ala Lys His Asn Gly Arg Ala Gly Leu His His Met Ala Trp Arg Val
 85 90 95
 Asp Asp Ile Asp Ala Val Ser Ala Thr Leu Arg Glu Arg Gly Val Gln
 100 105 110
 Leu Leu Tyr Asp Glu Pro Lys Leu Gly Thr Gly Gly Asn Arg Ile Asn
 115 120 125
 Phe Met His Pro Lys Ser Gly Lys Gly Val Leu Ile Glu Leu Thr Gln

130
Tyr Pro Lys Asn
145

135

140

Q E E F D D E E G D